

bela sphagni. Figure 18 *Nebela barbata*. For characters of the species see *Proc. Acad. Nat. Sci.* 1874, 156.



Fig. 16.



Fig. 17.



Fig. 18.

On Certain Trap Rocks from Brazil.—Prof. PERSIFOR FRAZER, Jr., stated that during a recent engagement by the Commission of Brazil to the International Exhibition, now being held here, to examine and arrange the ores, minerals, and rocks of that country, a number of traps were obtained, of which thin sections had been submitted to a preliminary investigation.

These have been studied without the aid of chemical analysis, and the results, so far, are hereby laid before the Academy.

It is evident that this mode of determination cannot by itself be exhaustive, but it is believed that some new facts are hereby added to our knowledge of the igneous rocks of the globe, and a close analogy between certain species of North and South America made out. It was not possible to ascertain the localities in all cases. The following is a partial list:—

No. 580.—Between Casa Branea and Rio das Pedras.

No. 587.—Between Ouro Preto and Casa Branca.

No. 610.—From Resaquinha.

No. 790.—Procedeneia Morrotos.

The following is a hasty glance at their mineral constituents:—

No. 279.—*Dolerite*. Labradorite, Pyroxene, Chlorite, and Magnetite.

No. 580.—Pyroxenite rock, with microliths.

No. 587.—Pyroxene and Biotite.

No. 591.—Decomposed mass, containing Pyroxene and Magnetite.

No. 610.—Chlorite, with concretions of Ferric Hydrate.

No. 635.—Under 230 diameters, and without polarized light, the “flowing” structure is well shown.

Between crossed Nicol’s prisms the lines which resemble microliths exhibit an intricate network and polarize from white to light blue. Under 1080 diameters the above lines seem to be corrugations or clefts in the mass, while a new set of minute black and brown prismatic crystals come into view, indicating by the gradual curve in the line of their direction also a “flow

structure." Chrysolite (*Olivine*) and Mica appear to be present in this specimen.

No. 665.—Labradorite rock, with bundles of microliths. Containing also pyroxene and magnetite.

No. 684.—With an enlargement of 350 diameters and between Nicol's prisms this specimen exhibits Labradorite and Pyroxene (one beautiful main section of the latter). The blades of labradorite are smaller and the pyroxene less distributed through the mass than in No. 706.

Another mineral not certainly determined polarizes from green to black.

No. 692.—Pyroxene in a vitreous paste, containing Chlorite.

No. 706.—With a magnifying power of 230 diameters this section exhibits a mass of brown and reddish-brown fragments of irregular shape.

The cross fractures are numerous and irregular. Various angles of fracture were found to give $84^{\circ} 47'$, $78^{\circ} 51'$, $73^{\circ} 20'$, $53^{\circ} 59'$, and $88^{\circ} 28'$, but the micro-goniometer employed could not be relied on for angles of less than 1° .

The latter of these measurements is sufficiently near the prismatic angle of Augite (*i. e.* $87^{\circ} 5'$), to suggest the presence of that mineral.

Many slabs of Labradorite are associated with it, each of which is readily detected by its characteristic mode of twinning.

Black masses of Magnetite are strewn through the field of view, and some rod-like Apatite.

Under 350 diameters more crystals of Apatite appear.

With *one* prism, isolated spots of the mineral first described show feeble dichroism. *Dolerite*.

No. 769.—Decomposed Pyroxene, with Magnetite and Labradorite. The specimen shows signs of the passage of Dolerite into a rock more nearly resembling Diabase from the presence of a chloritic material (perhaps the "Diabantite" of Hawes), and its generally decomposed appearance.

No. 786.—Under 1080 diameters Chlorite and Pyroxene are visible, together with a white, pasty glass.

No. 790.—Feldspar, Olivine, Magnetite, and Apatite.

No. 795.—*Dolerite*. Consists of Pyroxene, Magnetite, Labradorite, and large numbers of Apatite crystals.

(The sections of the Magnetite and of the Apatite crystals are very fine.)

Feeble dichroism is observed in spots on the Pyroxene. No Mica visible.

No. 795.—Pyroxene, Magnetite, Labradorite, and a large number of Apatite crystals.

x. Magnetite, Chrysolite, Labradorite, and some Pyroxene.

x'. Labradorite, Pyroxene, Magnetite, and Apatite. *Dolerite*.

Thin sections of these rocks and also those of similar character from Pennsylvania were projected on the screen in polarized light and compared.

Harvey Fisher, Geo. A. Wright, A. C. Lambdin, M.D., John Russel, J. C. Martindale, and A. E. Brown were elected members.

The following papers were ordered to be published:—